High-Mu Triode—Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

For Color-Killer, Sound IF Amplifier, and Band-pass-Amplifier Applications in TV Receivers

Electrical:

Heater Characteristics and Ratings:

Voltage (AC or DC)		6.3 ± 0.6	volts
Current at heater volts = 6.3		0.600	amp
Peak heater-cathode voltage:			
Unit:	*Triode*	*Pentode*[a]	
Heater negative with respect to cathode	200 max.	20 max.	volts
Heater positive with respect to cathode	200[b] max.	20 max.	volts

Direct Interelectrode Capacitances:

	Without External Shield	*With External Shield*[c]	
Triode Unit:			
G_T to P_T	3.0	3.0	pf
Input: G_T to $(H+G3_P+IS, K_T)$	3.2	3.2	pf
Output: P_T to $(H+G3_P+IS, K_T)$	1.6	2.4	pf
Pentode Unit:			
$G1_P$ to P_P	0.046 max.	0.030 max.	pf
Input: $G1_P$ to $(H+G3_P+IS, G2_P, K_P)$	7.5	7.5	pf
Output: P_P to $(H+G3_P+IS, G2_P, K_P)$	2.2	2.8	pf
G_T to P_P	0.018 max.	0.003 max.	pf
$G1_P$ to P_T	0.006 max.	0.002 max.	pf

Characteristics, Class A_1 Amplifier:

Unit:	*Triode*	*Pentode*	
Plate Voltage	250	125	volts
Grid-No.2 Voltage	–	125	volts
Grid-No.1 Voltage	−2	−1	volts
Amplification Factor	100	–	
Plate Resistance (Approx.)	31500	150000	ohms
Transconductance	3200	10000	µmhos
Plate Current	1.8	12	ma
Grid-No.2 Current	–	4.5	ma
Grid-No.1 Voltage (Approx.) for plate µa = 20	−3.5	−7	volts

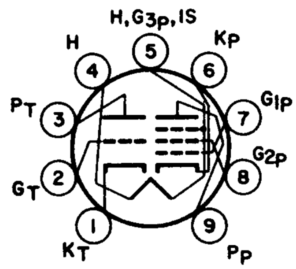
Mechanical:

Operating Position	Any
Type of Cathodes	Coated Unipotential
Maximum Overall Length	2-3/16"
Maximum Seated Length	1-15/16"

6KT8

Length, Base Seat to Bulb Top
(Excluding Tip). . . . . 1-9/16" ± 3/32"
Diameter . . . . 0.750" to 0.875"
Dimensional Outline. . . . . .See *General Section*
Bulb T6-1/2
Base . . . . Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW 9QP

- Pin 1 - Triode Cathode
- Pin 2 - Triode Grid
- Pin 3 - Triode Plate
- Pin 4 - Heater
- Pin 5 - See Footnote a (Heater, Pentode Grid No.3, Internal Shield)
- Pin 6 - Pentode Cathode
- Pin 7 - Pentode Grid No.1
- Pin 8 - Pentode Grid No.2
- Pin 9 - Pentode Plate



AMPLIFIER — Class A₁

Maximum Ratings, *Design-Maximum Values:*

	Unit: *Triode*	*Pentode*	
Plate Voltage.	330 max.	330 max.	volts
Grid-No.2 Supply Voltage	–	330 max.	volts
Grid-No.2 Voltage.	See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section		
Grid-No.1 Voltage:			
Positive-bias value.	0 max.	0 max.	volts
Grid-No.2 Input:			
For grid-No.2 voltages up to 165 volts.	–	0.55 max.	watt
For grid-No.2 voltages between 165 and 330 volts.	See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section		
Plate Dissipation.	1 max.	2.5 max.	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:			
For fixed-bias operation . . .	0.5 max.	0.25 max.	megohm
For cathode-bias operation . .	1 max.	1 max.	megohm

[a] Pin No.5 (Pentode Grid No.3, Internal Shield, and Heater) should be operated at or near ground potential. If the peak cathode-to-grid-No.3 voltage exceeds +20 volts, undesirable changes in the tube characteristics may result.
[b] The dc component must not exceed 100 volts.
[c] With external shield JEDEC No.315 connected to pins 4 and 5.